

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First named inventor : Gideon Stein

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For : Collision Warning System

Examiner : Sathyanaraya V. Perungavoor

Group Art Unit : 2624

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Declaration Under 37 CFR 1.132

Sir:

Evidence is presented herein as to the patentability of the claims of the present application in view of Stein 39018.

Tests were performed in 2003 at Mobileye based on the teachings of Stein (WO/200139018). The test results indicated unexpected false positive/false negative collision warnings in which time to collision TTC is determined based on momentary time- to- contact Tm (Tv in the present claims) and not responsive to relative acceleration between the vehicle and object. Therefore we needed to improve the calculation of time to collision TTC as disclosed in Stein 39018. It was not clear at the time that information from images acquired from a monocular camera would provide a sufficient solution. Although scale S (change in image size) is a natural image measurement as disclosed in Stein 39018, attempts to extend the TTC calculation to be responsive to acceleration by taking the derivative dS/dt of scale S were not promising.

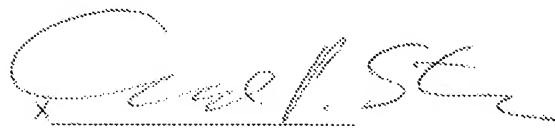
Some of the test results based on the teachings of Stein 39018 are shown in the priority document of the present application entitled "Forward Collision Warning with a Single Camera" and are compared

to the calculation of time-to-collision responsive to relative acceleration based on time rate of change of the momentary time to contact  $T_m$  (also known as  $T_v$ ) over multiple image acquisition times according to the claims of the present application.

It took us a year to get it to work. As can be seen in the priority document, we had to develop a test methodology and apparatus so we could do the field tests.

Dr. Gideon Stein is Chief Scientist of Mobileye Technologies Ltd, one of the inventors of the present application and the cited reference WO/200139018.

I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true.

 Date June 16th 2011

Gideon Stein